



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,068	02/02/2004	Chia-Yi Liang	LIAN3021/EM	5513
23364	7590	03/22/2007	EXAMINER	
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			STEELMAN, MARY J	
			ART UNIT	PAPER NUMBER
			2191	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/22/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)
	10/768,068	LIANG ET AL.
	Examiner Mary J. Steelman	Art Unit 2191

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 02 February 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

1. Claims 1-20 are pending.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The systems of claims 1-20 lacks hardware to enable the functionality.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re*

Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-20 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10982932. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are directed towards setting states, generating instructions, and paths for workflow management.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Smirnov et al.

Per claims 1 and 11:

A workflow defining system, comprising:

Col. 1: 44, workflows can be generated...first number of state nodes, second number of task nodes...generating a workflow...paths representing a result of applying one or more actions.

a state setting module, which at least sets a first terminal state, a second terminal state, and a third terminal state;

Col. 4: 55:, collection of state nodes 12 and task nodes 14..form a state transition graph task nodes 14 define processes or actions by which predecessor state nodes 12 are transformed to successor state nodes 12. See state nodes at col. 5: 51.

an instruction generating module, which generates a first instruction, a second instruction, and a third instruction for the first terminal state, the second terminal state, and the third terminal state, respectively;

Col. 4: 57, task nodes define processes or actions

a path generating module, which generates a first path, a second path, and a third path according to the first instruction, the second instruction, and the third instruction, wherein the first path, the

second path and the third path respectively points from the first instruction, the second instruction and the third instruction to one of the first terminal state, the second terminal state and the third terminal state.

Col. 5: 3, Paths are defined as complete routes to a final product and therefore may be regarded as workflows or production plans.

Per claims 2 and 12:

-data of the first terminal state are output from the first terminal state via the first path when the first instruction is executed;

-data of the second terminal state are output from the second terminal state via the second path when the second instruction is executed;

-data of the third terminal state are output from the third terminal state via the third path when the third instruction is executed.

Col. 5: 56, During processing (executing) or a real world job in the manufacturing environment...after an action associated with a node has been completed, all rules of the node may be evaluated. If a rule is satisfied, the job may be passed to the successor node associated with the rule...passed to multiple successor nodes (first, second, third terminal state output)

Per claims 3 and 14:

-each one of the first instruction, the second instruction and the third instruction could point from the corresponding terminal state to at least two of the first terminal state, the second terminal state and the third terminal state.

Col. 6: 21, task nodes are introduced into the model to represent significant steps in the processing of materials in the manufacturing environment.

Col. 6: 56, inventory item or material defined by a particular state node may be produced by any of the actions associated with any immediate predecessor task nodes. (instruction could point to different states)

Per claims 4 and 13:

-the state setting module could further add a fourth terminal state; the instruction generating module could further generate a fourth instruction for the fourth terminal state; and the path generating module could further generate a fourth path according to the fourth instruction, the fourth path pointing from the fourth instruction to at least one of the first terminal state, the second terminal state, the third terminal state, and the fourth terminal state.

Col. 6: 17, State nodes may be chosen to represent any appropriate level of item or material or process.

Per claims 5 and 15:

-the instruction generating module could further generate a fifth instruction for one of the first terminal state, the second terminal state and the third terminal state, the path generating module could further generate a fifth path according to the fifth instruction, and the fifth path points from the fifth instruction to at least one of the first terminal state, the second terminal state and the third terminal state.

Col. 6:17, Task nodes may be chosen to represent any appropriate level of item or material or process.

Per claims 6 and 16:

-a path altering module, which could alter one of the first path, the second path and the third path to point to another one of the first terminal state, the second terminal state and the third terminal state.

Col. 7, 31, "alternative binding processes 30 and 32. Col. 8:37, 'alternate routes'

Per claims 7 and 17:

-a path altering module, which could alter one of the first path, the second path and the third path to point to another two of the first terminal state, the second terminal state and the third terminal state.

Col. 8: 42, scheduler perform route selection according to rules col. 8: 37, 'alternate routes'

Per claims 8 and 18:

-a path deleting module, which could delete at least one of the first path, the second path and the third path.

Col. 10:26, Model may be continually updated to accurately reflect the real world manufacturing environment...operators take breaks or are replaced with new workers and/or machines are rotated in and out... (delete any of said paths)

Per claims 9 and 19:

-cooperates with at least one terminal device, wherein: the terminal device displays the first terminal state, the second terminal state, the third terminal state, the first instruction, the second instruction and the third instruction, so that at least one of the first instruction, the second instruction and the third instruction is selected to be executed.

Col. 10: 51, Model 144 calls upon scheduler 148 to provide scheduling information (to execute model). See FIG. 2, states and tasks (instructions)

Per claims 10 and 20:

-added data are input from the terminal device to at least one of the first terminal state, the second terminal state, and the third terminal state.

See FIG. 6, input @ #142

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Steelman, whose telephone number is (571) 272-3704. The examiner can normally be reached Monday through Thursday, from 7:00 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Zhen can be reached at (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned: 571-273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mary Steelman
03/12/2007

Mary Steelman
Primary Examiner